

Atty. Dkt. No. 039153-0433 (C167596-CIP)

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 19, 21, 23 and 24 are currently being amended.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 19-38 remain pending in this application. No new matter is added in the claim amendments.

On page 2 of the Office Action, the Examiner has objected to claims 19, 22 and 26 because of the term "a minimum lithographic feature." The Examiner also commented that limitation conductive layer and another conductive material in claim 33 is indefinite.

Applicants respectfully traverse the rejection with respect to the term "minimum lithographic feature." Applicants have amended claim 33 in accordance with the Examiner's suggestions.

Applicants note that the term "minimum feature" or "minimum lithographic feature" is described throughout the present application. The term "minimum lithographic feature" relates to the smallest feature spacing and aperture size achievable by a conventional lithographic patterning technique. A conventional lithographic patterning technique utilizes masks and photoresist to define a feature. A conventional lithographic patterning technique does not utilize spacers, RELACS or other processes which minimizes spacings, aperture widths and feature sizes after conventional patterning is performed. Accordingly, withdrawal of the rejection of claims 19, 22 and 26 related to the term "minimum lithographic feature" is respectfully requested.

Atty. Dkt. No. 039153-0433 (C167596-CIP)

On page 3 of the Office Action, claims 19-38 are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,940,710 ("Chung") in view of U.S. Patent No. 6,287,951 ("Lucas"). The Examiner states:

Chung teaches an integrated circuit, including at least a pair of local interconnects with one interconnect on each side of gate transistor . . . However, Chung does not teach or suggest an etching stop layer in forming barrier layer titanium nitride before conductive material tungsten. Lucas teaches forming an etching stop layer . . .

Applicants respectfully traverse the rejection. Chung and Lucas are referred to as the cited art below.

As the Examiner noted in the rejection under 35 U.S.C. § 112, each of independent claims 19, 23 and 26 recites a feature related to a minimum lithographic feature. This feature is not shown, described, or suggested in the cited art. With respect to independent claim 19, the local interconnects are spaced from each other by a minimum lithographic feature and each local interconnect is a minimum lithographic feature. In addition, the width of the transistor is not greater than 3 minimum lithographic features. The gate is provided in a space less than or equal to one lithographic feature.

In direct contrast to the present invention recited in claim 19, Chung does not show, describe or suggest a transistor having a gate that is equal to or less than one lithographic feature and a transistor with a total length of 3 minimum lithographic features. Gate electrode 5 is more than one minimum lithographic feature. Layer 6 is a minimum lithographic feature as shown in figure 2e. Accordingly, gate electrode 5 is greater than one lithographic feature. Further, the lateral dimension of the transistor is more than three times the width of layer 6. Lucas shows a conventional process performing contacts and accordingly cannot provide the suggestions of the process recited in claim 19. Thus, claim 19 and its dependent claim 20 are patentable over the cited art.

Atty. Dkt. No. 039153-0433 (C167596-CIP)

With respect to independent claim 21, claim 21 recites that the space for the gate is less than or equal to one minimum lithographic feature. Accordingly, claim 21 is patentable for the same reasons discussed above with respect to claim 19. Therefore, it is respectfully submitted that claim 21 and its dependent claims 22 and 24 are patentable over the cited art.

With respect to independent claim 25, claim 25 recites a structure which is manufactured by a process in which holes for local interconnects are formed first. The process results in a structure in which spacers have a non-rounded portion next to the local interconnect. (See spacer 35 in FIGURES 12-15A of the present application.) In direct contrast, the spacers associated with the contacts in Chung have their rounded portion on the side of the contact. Lucas has a similar formation. This formation is directly opposite to the structure formed by the process of claim 25. Accordingly, neither Chung nor Lucas teach or suggest the structure recited in claim 25. Accordingly, it is respectfully submitted that claim 25 and its dependent claims 26-38 are patentable over the cited art.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit

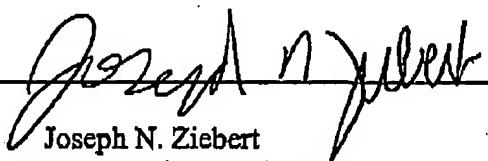
Atty. Dkt. No. 039153-0433 (C167596-CIP)

Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

Date MARCH 3, 2004

By



Joseph N. Ziebert
Attorney for Applicants
Registration No. 35,421

FOLEY & LARDNER LLP
Customer Number: 34083
Telephone: (414) 297-5768
Facsimile: (414) 297-4900